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New insights into cellular cholesterol acquisition: Promoter analysis of human *HMGCR* and *SQLE*, two key control enzymes in cholesterol synthesis

Vicky Howe, Laura J. Sharpe, Anika V. Prabhu, Andrew J. Brown

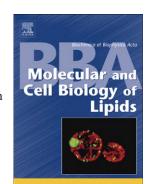
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### ACCEPTED MANUSCRIPT

# New insights into cellular cholesterol acquisition: promoter analysis of human *HMGCR* and *SQLE*, two key control enzymes in cholesterol synthesis

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\*Running title: Transcriptional regulation of human HMGCR and SQLE

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#### **Highlights**

- We found that human HMGCR and SQLE promoters both possess two closely-spaced SREs
- We identified a novel NF-Y site in the human *HMGCR* promoter
- We found two NF-Y sites in the human *SQLE* promoter, which are conserved with mouse
- We show a previous study incorrectly identified an SRE in the human SQLE promoter
- HMGCR is only activated by high SREBP-2 levels, when cholesterol is truly needed

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